

Supporting Information

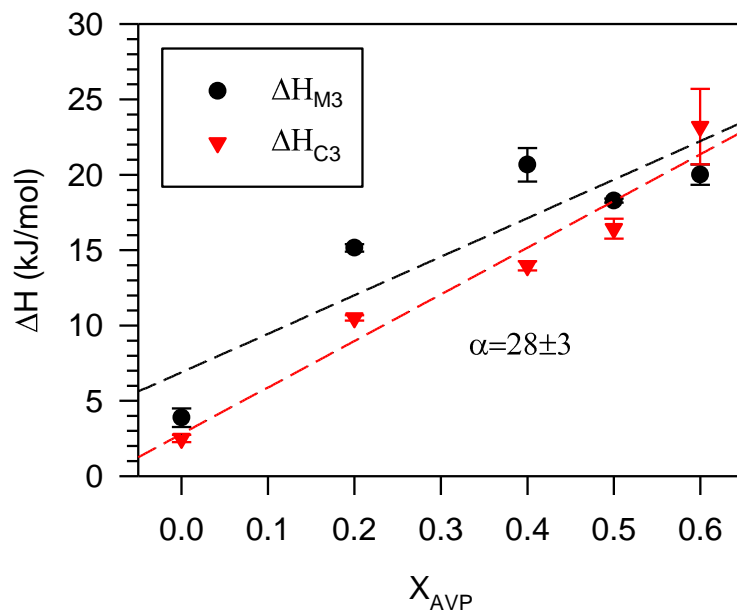


Figure S1. Associated crystallization and melting enthalpies of T_3 vs X_{AVP} .

Table S1. Non-lipid bioactive compounds in AVK detected by ESI-MS.

Compound (Tentative identification)	Chemical Formula	Calculated Exact Mass	AVK
Carotenoids			
All-trans- β -Carotene [39-42] All-trans- α -carotene [39-42] 13-cis- β -carotene [39-42] cis- γ -carotene [39-42] 15-cis- β -carotene [39-42] Phytoene [39-42]	$C_{40}H_{56}$	536.4382	536.3634 (0.01%)
all-trans- β -cryptoxanthin [39-42] all-trans- α [39-42] cryptoxanthin [39-42] zeinoxanthin [39-42] 5,8-epoxy- β -carotene [39-42]	$C_{40}H_{56}O$	552.4331	552.3399 ($\leq 0.001\%$)
Polyphenols			
Chlorogenic acid [43]	$C_{16}H_{18}O_9$	354.0951	354.2385 (1.0%)
Caffeic acid [42-44]	$C_9H_8O_4$	180.0422	203.0645 ($\leq 0.001\%$)
Ellagic acid [45]	$C_{14}H_6O_8$	302.0062	325.1596 (0.04%)
Quercitrin [43]	$C_{21}H_{20}O_{11}$	448.1005	471.3073 ($\leq 0.001\%$)
Rutin (quercetin glucoside) [43]	$C_{27}H_{30}O_{16}$	610.1534	-
Catechin [43]	$C_{15}H_{14}O_6$	290.0790	313.1671 (0.07%)
Myricetin [43]	$C_{21}H_{20}O_{12}$	318.0376	341.1953 (0.1%)
Kaempferol [45]	$C_{15}H_{10}O_6$	286.0477	309.0396 (0.07%)
Phytosterols			
β -Sitosterol [10, 30]	$C_{29}H_{50}O$	414.3862	437.2311 (0.3%)
Ergost-25-ene-3,5,6,12-tetrol [40]	$C_{28}H_{48}O_4$	448.3553	471.3073 ($\leq 0.001\%$)
Cycloeucalenol acetate [40]	$C_{32}H_{52}O_2$	468.3967	491.3067 (0.05%)
Cycloartenol [40] Cycloeucalenol [46]	$C_{30}H_{50}O$	426.3862	449.2933 (0.4%)
Arundoin [46] 24-methylenecycloartanol [46]	$C_{31}H_{52}O$	440.4018	463.2881 (0.1%)